



UNIVERSITY OF JYVÄSKYLÄ

Country report Finland

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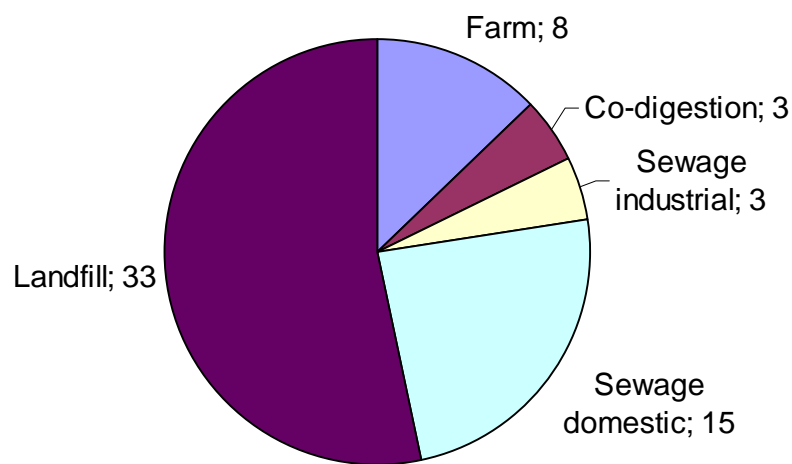
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News in brief

- Proposed policy for biogas feed-in tariff will be published in June 2009
 - Tariff system in force in 2010
- Changes in legislation/instructions on digestate utilisation
 - Biogas plant products better considered, previously based on compost types products
- Several centralised and farm-scale plans under planning or construction
- Investment grants in the order of 15-40% available for construction of biogas plants
- Ministry of Agriculture and Forestry allocated 8 M€ for investment grants in 2008
 - > Applications for 66 M€ (39 applications, total investment 122 M€)
 - > 15 projects were granted (total investment 22 M€)

Biogas plants in Finland 2007

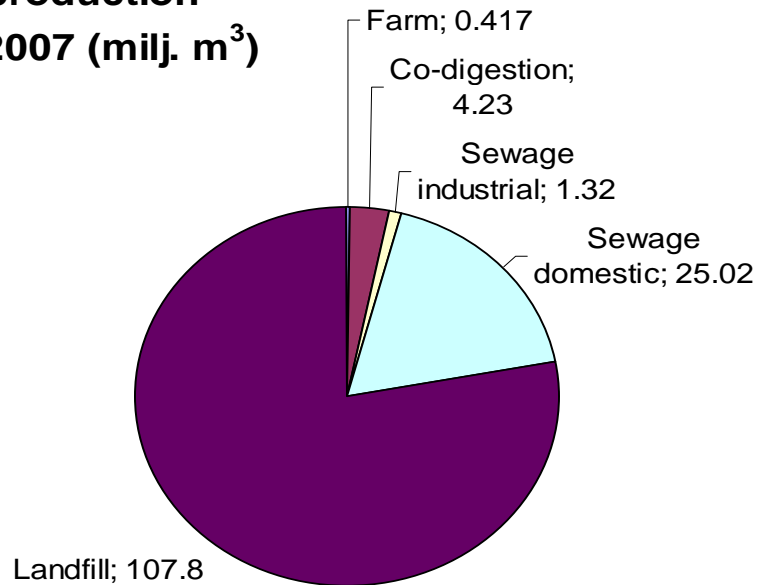
- Total 58 biogas production plants 2007 (including landfills)
- Landfills are currently the largest biogas producer in Finland



Biogas production in Finland 2007

- Total biogas production 138,82 million m³ (614 GWh) in 2007
- Co-digestion plants increased their biogas production 10 %, landfills increased 6 % from previous year (2006)

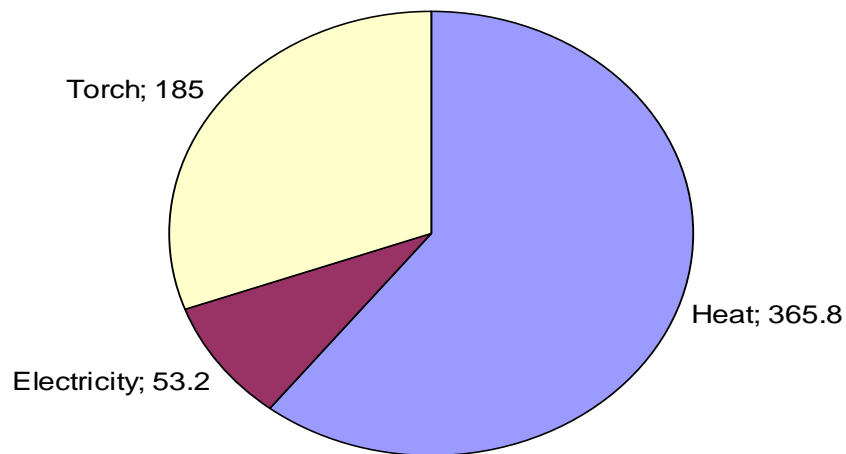
**Biogas production
by source 2007 (milj. m³)**



Biogas utilization in Finland

- Biogas utilization was 69 % of total production in 2007
- Electricity generation increased 9 % from previous year (2006)
- 185 GWh of energy was wasted due to torching of biogas

Biogas utilization in Finland 2007 (GWh)

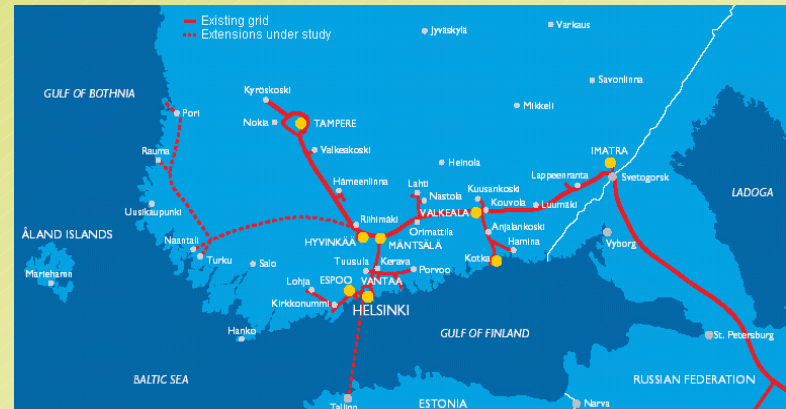


Traffic biogas utilization

- About 500 gas vehicles total
- Currently 11 public natural gas fuelling stations in southern Finland (2008), more opening in near future
- National gas grid operator (Gasum Oy) plans to build 30 public natural gas fuelling stations by 2010,
 - some could be build outside the gas grid using liquefied natural gas transported by tanker trucks
- Biomethane injection into the grid possible

Farm-scale biogas fuelling station outside the natural gas grid near Jyvaskyla

- About 15 biogas vehicles fuelling (one delivery car and taxi) by 2008
- Farm's new biogas plant enables biomethane for ca 200 cars



Gas grid. Source high methane content gas from Russia

R&D

- Demonstration of various types of biogas concepts
- Processing digestates to more valuable and safe products
- New feedstocks, e.g. from pulp and paper & biorefinery industries
- Crop cultivation methods and less demanding crops
- Overall economics and environmental impacts in practice

Centralized biogas plants



Centralised and farm scale digesters



Possible flow sheets for centralised biogas plants

